



Focus

Urban Stormwater

What is Urban Stormwater?

Stormwater is the water that runs off surfaces such as rooftops, paved streets, highways, and parking lots. It can also come from hard, grassy surfaces including lawns, play fields, as well as graveled roads and parking lots.

Why is Urban Stormwater a Problem in Washington?

Urban stormwater is a problem because it is often polluted and can harm human health, drinking water, and fish habitat. Untreated stormwater contains toxic metals, organic compounds, and bacterial and viral pathogens. It is not safe for people to drink, and is not recommended for swimming. In some areas of Washington, gravelly soils allow rapid infiltration of stormwater. Untreated stormwater discharging to the ground could contaminate aquifers that are used for drinking water. Virtually all of our urban creeks, streams, and rivers are harmed by urban stormwater runoff. Stormwater is the leading contributor to water quality pollution of urban waterways. Urban development causes significant changes in patterns of stormwater runoff – leading to increased flooding during the wet season and decreased stream flows during the dry season.

Current Programs to Control Pollution from Stormwater

In 1987, Congress changed the federal Clean Water Act by declaring the discharge of stormwater (traditionally considered a nonpoint source) from certain industries and municipalities to be a point source of pollution requiring National Pollutant Discharge Elimination System (NPDES) permits or water quality discharge permits. Washington State is delegated authority by the U.S. Environmental Protection Agency (EPA) to implement the water quality permit program.

The EPA stormwater regulations establish two phases for the stormwater permit program. Under Phase I, the Department of Ecology (Ecology) has issued stormwater NPDES General Permits to cover stormwater discharges from certain industries and construction sites involving five or more acres, and municipalities with a population of more than 100,000.

There are approximately 1,400 facilities covered under the Industrial General Permit. The number of construction sites under the Construction General Permit varies seasonally, from about 350 to nearly 700 sites. The cities of Seattle and Tacoma, and Clark, King, Pierce, and Snohomish counties are covered under the Phase I Municipal General Stormwater Permit. The Washington Department of Transportation is also covered within those jurisdictions, except for Clark County. The municipal stormwater permit requires the implementation of a stormwater management program. The stormwater management program is a plan for the term of the permit to reduce the discharge of pollutants, reduce harm to receiving waters, eliminate inappropriate discharges, and make progress towards compliance with surface water, ground water and sediment standards. Ecology is in the process of reissuing the municipal stormwater permit.

Future Stormwater Requirements

EPA signed the final Phase II stormwater regulations in December 1999. The Phase II regulations expand the requirement for stormwater permits to all municipalities located in urbanized areas, and to construction sites between one and five acres. The expansion of the construction site permit is likely to affect thousands of sites. The rule also requires an evaluation of cities outside of urbanized areas that are more than 10,000 in population to determine if a permit is necessary for some or all of these cities. Under the new rule up to 90 additional municipalities in Washington may need stormwater permits. According to EPA rules, Ecology must issue a general permit for all Phase II municipalities and construction activities by December 2002, and those municipalities and construction sites must have permit coverage by March 2003. The Phase II municipal general permit must include provisions for public education and outreach, public participation and involvement, illicit discharge detection and elimination, construction site runoff controls, post-construction runoff controls, pollution prevention, and good housekeeping practices.

State Stormwater Plan

The 1999 Legislature appropriated funds to Ecology to form an advisory committee to update the state stormwater management plan and the Puget Sound stormwater technical manual. Since there was not a current formal state stormwater management plan, the committee provided input to Ecology on the development of such a plan. Ecology partnered with the Department of Transportation to sponsor a study of stormwater management. The stormwater study focuses on relationships between existing activities and opportunities for improvement. The study defines the framework of stormwater management in Washington and recommends measures that need to be taken to more completely address stormwater management. This report is available online at: www.ecy.wa.gov/programs/wq/stormwater/index.html

Stormwater Management Manual

Ecology has revised its stormwater management manual for western Washington and is in the process of completing a stormwater management manual for eastern Washington. The manual has been updated to contain new information and technical standards and to expand the applicability beyond Puget Sound to all of western Washington. The objective of the manual is to provide a commonly accepted set of standards and guidance for stormwater control measures. These measures are to be used by local governments, state agencies, and private businesses to control runoff from new development and redevelopment activities. It is generally expected that when these management measures are applied to new development and redevelopment activities the stormwater runoff produced will comply with water quality standards.

Significant changes in the manual include: changing the thresholds for selection of Best Management Practices (BMPs) to require nearly all projects to use appropriate on-site stormwater management techniques, increased flow control requirements to address both peak flows and duration of high flows, and the requirement for higher levels of treatment for discharges from some commercial and industrial sites.

For more information, please contact Ed O'Brien at (360) 407-6438, or visit Ecology's Stormwater Home Page at: www.ecy.wa.gov/programs/wq/stormwater/index.html

Ecology is an equal opportunity agency. If you have special accommodation needs, please call Donna Lynch at (360) 407-7529 (Voice) or (360) 407-6006 (TDD). E-mail may be sent to dlyn461@ecy.wa.gov